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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,642	07/21/2003	Koji Hirata	381NT/43243C4	4544

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EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT PAPER NUMBER

2873

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/622,642

**Applicant(s)**

HIRATA ET AL.

**Examiner**

Jordan M. Schwartz

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10/29/03 (Preliminary Amendment).
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 65-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 65-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 08/764,649.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 08/764,649, filed on December 11, 1996.

### ***Information Disclosure Statement***

Applicant submitted copies of the Pto-892 forms and Pto-1449 form from prior related applications. However, if applicant wants these specific references to be considered, then the specific patents referred to therein should be listed separately on a PTO-1449 form for this application. The examiner can then initial that these have been considered for this application.

### ***Specification***

The abstract of the disclosure is objected to because it is too long. Specifically, the abstract cannot exceed 150 words and it therefore needs be shortened in length. Correction is required. See MPEP 37 CFR 1.72.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 112***

Claims 65 and 69 (and dependent claims 66-68 and 70-72) are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With reference to claims 65 and 69, that part of the claims concerning the first lens stating "said central portion being formed into a convex shape" renders the claims vague and indefinite. Specifically, it is not clear if applicant means that the central portion is biconvex, that the central portion has a surface that is convex toward the screen side" (which is the assumed meaning) or if some other meaning is intended and the lack of clarity renders the claims vague and indefinite.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 65 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al patent number 5,048,940.

Ueda et al reads on these claims by disclosing the limitations therein including the following: see Figure 2 and corresponding example 2 disclosing a projection lens system (column 5, line 6) for enlarging and projecting an image from a source onto a screen (column 1, line 11 to column 2, line 16); said lens system having a plurality of lens elements (Figure 2) comprising from a screen side to an image generating source side, a first lens for compensating an aberration (column 2, lines 48-50, Figure 2, either

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the first or second positive lens elements of the first lens group); the first lens having a surface in which the central portion has a surface that is convex toward the screen side (Figure 2 re the first or second positive lens elements of the first group); a second lens having a biconvex shape and having the strongest power of the lens elements (Figure 2, column 2, line 56, the positive lens of the second lens group); a third lens connected to a cooling liquid to cool the image generating source (Figure 2, example 2, the element in contact with the liquid coolant); this element with a concave surface toward the screen (Figure 2, example 2, the element in contact with the liquid coolant). With respect to example 2, the second derivative value of this example with respect to the third lens first increases, then decreases and then increases again. Therefore, the second derivative value increases within a range of "r" up to a predetermined point (example 2 in that it first increases and the "predetermined point" being the point at which it no longer increases); and then decreases "within a range" from a predetermined point to the maximum value of "r" (example 2 with the entire range being from this predetermined point to the maximum value of "r" and since the second derivative is decreasing for a portion of this, and since applicant is not claiming that it is decreasing throughout the entire range from the predetermined point to the maximum value of "r", then it is therefore decreasing "within a range"). Ueda et al further discloses a projection display apparatus with an image generating source and a screen (column 1, line 6 to column 2, line 16). Ueda et al discloses as is set forth above but does not specifically disclose the claimed third lens as meniscus shaped. However, Ueda et al teaches that this lens can be meniscus shaped for the purpose of decreasing the cost of

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the system (column 5, line 48). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the third lens of Ueda et al as meniscus shaped since Ueda et al further teaches that this lens can be meniscus shaped for the purpose of decreasing the cost of the system.

***Allowable Subject Matter***

Claims 66-68 and 70-72 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with respect to claims 66 and 70, none of the prior art either alone or in combination disclose or teach of the claimed projection lens system or projection display apparatus, specifically including, as the distinguishing feature in combination with the other limitations, the claimed predetermined point situated approximately 0.7 of the maximum value of "r". Specifically, with respect to claims 67-68 and 71-72, none of the prior art either alone or in combination disclose or teach of the claimed projection lens system or projection display apparatus, specifically including, as the distinguishing feature in combination with the other limitations, the claimed first aspheric lens having a shape which is one of concave on a side nearest the screen in a central portion thereof, and biconcave.

Examiner's Comments

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Tanaka et al, Kaneko et al, and Nakajima et al are being cited herein to show projection lens systems having some similar structure to that of the claimed invention.

For applicant's information, to overcome the art rejections above, the examiner called applicant's representative Gary Edwards with a proposed change to overcome the art. The examiner suggested, in claims 65 and 69, to change the fifth paragraph of claim 65 (with a similar change to claim 69) to state "...from zero up to a predetermined point, and monotonically decreases from said predetermined point to a maximum value of  $r_i$ ". Though applicant's representative made a diligent effort to try and resolve the above issues, he was unable to hear back from his client in a timely manner thereby prompting this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:00-5:30), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached at (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Schwartz', with a large, stylized loop at the end.

Jordan M. Schwartz  
Primary Examiner  
Art Unit 2873  
February 19, 2004